



Ahmed 3-39-39-3-13

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s): Walid Ahmed et al.
Case: 3-39-39-3-13
Serial No.: 09/191,132
Filing Date: November 13, 1998
Group: 2666
Examiner: Shick C. Hom

Title: Addressing Scheme for a Multimedia
Mobile Network

I hereby certify that this paper is being deposited on this date with the U.S. Postal Service as first class mail addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signature: [Signature] Date: September 20, 2004

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SECOND SUPPLEMENTAL APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Sir:

Applicants (hereinafter referred to as "Appellants") hereby appeal the rejection of claims 12-14 and 16-18 of the above referenced application.

REAL PARTY IN INTEREST

The present application is assigned to Lucent Technologies Inc., as evidenced by an assignment recorded January 7, 1999 in the U.S. Patent and Trademark Office at Reel 9698, Frame 0131. The assignee, Lucent Technologies Inc., is the real party in interest.

RELATED APPEALS AND INTERFERENCES

There are no known related appeals and interferences.

STATUS OF CLAIMS

Claims 1, 3-6 and 8-20 are pending in the present application. Claims 1, 3-6, 8-11, 15 and 19 are allowed. Claims 12, 13, 16 and 17 stand rejected under 35 U.S.C. §102(e) and claims 14 and 18 stand rejected under 35 U.S.C. §103(a). Claim 20 contains allowable subject matter but is objected to as being dependent upon a rejected base claim. Claims 12-14 and 16-18 are appealed.

STATUS OF AMENDMENTS

There have been no amendments filed subsequent to the rejection.

SUMMARY OF INVENTION

The present invention relates to mobile communication systems and, more particularly, to mobility management techniques in such systems that may include multimedia applications in a highly dynamic networking environment (Specification, page 1, lines 13-15). The present invention provides a network architecture, an addressing scheme, and various mobility management methodologies, as well as apparatus for implementing them in a packet-based mobile communications system, which are capable of supporting various voice and data services including, for example, multimedia services (Specification, page 5, lines 5-8).

The addressing scheme of the present invention alleviates a mobile user station from needing to be concerned with the mobility of other mobile user stations within the system. While the overall address of a mobile station may change due to the fact that it may become associated with a different network node, or a mobile station may have more than one address if it is associated with more than one network node, a correspondent mobile station is still able to send and receive packets to and from the initiating mobile station since the identifier of a mobile station remains the same (Specification, page 6, lines 7-14). The present invention is an exemplary packet based wireless communications system in which not only are end user terminals mobile, but in which system access points, referred to hereinafter as network nodes, are also mobile (Specification, page 8, lines 26-28).

By way of example, as recited in claim 1, a method for use in a mobile user station of a packet-based multiaccess communications system may comprise the following steps. First, an address is assigned to be associated with one or more packets of the mobile user station. The address

is a combination of an identifier of the mobile user station and an identifier of a network node in the communications system with which the mobile user station is currently associated. Second, another address is automatically reassigned to be associated with the one or more packets of the mobile user station when the station becomes associated with another network node of the communications system. The other address is a combination of the identifier of the mobile user station and an identifier of the other network node. A network node in the communications system is not required to obtain additional address information to direct a packet associated with a call to or from the mobile user station.

As a further example, as recited in claim 12, a method for use in a network node of a packet-based multiaccess communications system, the communications system including a plurality of mobile user stations, comprises the following steps. First, an address is assigned to the network node. The address is a combination of an identifier of the network node and an identifier of an interface associated with the network node. Second, packets are transferred to and from the network node in accordance with the address. The network node is able to move within the communications system in addition to the plurality of mobile user stations.

A diagram of a mobile communications system, according to an embodiment of the present invention, is shown in FIG. 1. This diagram illustrates mobile end users, network nodes, links and an internode network (Specification, page 9, line 13, through page 10, line 22). A diagram illustrating a network architecture of a mobile communications system, according to an embodiment of the present invention, is shown in FIG. 3A. This diagram illustrates components of the mobile end users and network nodes, which comprise, for example, a medium access control layer (Specification, page 11, line 9, through page 12, line 13). Flow charts illustrating mobile access methods, according to embodiments of the present invention, are shown in FIGS. 5A through 5C (Specification, page 23, line 1, through page 25, line 2).

ISSUES PRESENTED FOR REVIEW

(I) Whether claims 12, 13, 16 and 17 are properly rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,041,358 to Huang et al. (hereinafter “Huang”).

(II) Whether claims 14 and 18 are properly rejected under 35 U.S.C. §103(a) as being unpatentable over Huang in view of U.S. Patent No. 6,608,832 to Forslow (hereinafter “Forslow”).

GROUPING OF CLAIMS

Claims 12-14 and 16-18 do not stand or fall together. More particularly, claims 12 and 16 stand or fall together, claims 13 and 17 stand or fall together, and claims 14 and 18 stand or fall together.

ARGUMENT

Appellants incorporate by reference herein the disclosures of all previous responses filed in the present application, namely, responses dated April 5, 2002, November 19, 2002, and June 11, 2003, and Appeal Briefs dated August 13, 2003 and March 1, 2004. Sections (I) and (II) to follow will respectively address issues (I) and (II) presented above.

(I) Regarding the §102(e) rejection of claims 12, 13, 16 and 17, Appellants respectfully assert that Huang fails to teach or suggest all of the limitations in claims 12, 13, 16 and 17 for at least the reasons presented in Appellants’ previous responses as well as the reasons presented below.

It is well-established law that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Appellants assert that the rejection based on Huang does not meet this basic legal requirement. Support for this assertion follows.

The present invention, for example, as recited in independent claim 12, recites a method for use in a network node of a packet-based multiaccess communications system. The communications system includes a plurality of mobile user stations. An address is assigned to the network node. The address is a combination of an identifier of the network node and an identifier of an interface associated with the network node. Packets are transferred to and from the network node in accordance with the address. The network node is able to move within the communications system

in addition to the plurality of mobile user stations. Independent claim 16 recites a different aspect of the invention with similar limitations.

Huang discloses a communication network that includes mobile terminal nodes and base station nodes that are capable of providing packet communication for those mobile terminal nodes in their proximity. In a packet routing process, a packet may be transmitted to a base station node using an ATM address and a virtual channel connection identifier specified in an entry.

However, Huang fails to disclose that an address assigned to a network node, i.e., a base station node, is a combination of a network node identifier and an interface identifier. Further, Huang fails to disclose the mobility of network nodes. The Office Action cites column 4, line 60 through column 5, line 34 of Huang in providing support for the rejection. However, this portion of Huang describes the mobility of hosts, such as cell phones, and does not describe the mobility of their respective network nodes, i.e., the base stations. Thus, due to the fact that Huang fails to expressly or inherently describe the combination of a network node identifier and an interface identifier in the network node address, and the mobility of the network nodes, independent claims 12 and 16 are not anticipated by Huang.

Dependent claims 13 and 17 are patentable for at least the reasons presented above with regard to independent claims 12 and 16. Claims 13 and 17 also recite patentable subject matter in their own right. Dependent claims 13 and 17 recite that the interface identifier, which is combined with a network node identifier to form the address of the network node, is a data link address. The Office Action cites column 9, lines 53-63 of Huang in providing support for this rejection. Huang discloses a mobile terminal that may issue a packet to a new base station that includes its data link layer address. However, Huang fails to disclose that a data link address is the interface identifier that is combined with a network node identifier to form an address that is assigned to a network node. Accordingly, withdrawal of the rejection to claims 12, 13, 16 and 17 under 35 U.S.C. §102(e) is therefore respectfully requested.

(II) With regard to the issue of whether claims 14 and 18 are properly rejected under 35 U.S.C. §103(a) as being unpatentable over Huang in view of Forslow, the Office Action contends that Huang discloses all of the claim limitations recited in the subject claims except that the address

of the network node further includes an application flow identifier, which is allegedly taught by Forslow. Appellants respectfully assert that the combination of Huang and Forslow fails to establish a prima facie case of obviousness under 35 U.S.C. §103(a), as specified in M.P.E.P. §2143.

As set forth therein, M.P.E.P. §2143 states that three requirements must be met to establish a prima facie case of obviousness. First, there must be some suggestion or motivation to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited combination must teach or suggest all the claim limitations. While it is sufficient to show that a prima facie case of obviousness has not been established by showing that one of the requirements has not been met, Appellants respectfully believe that none of the requirements have been met.

First, there is a clear lack of motivation to combine the references. Appellants assert that no motivation or suggestion exists to combine Huang and Forslow in a manner proposed by the Examiner, or to modify their teachings to meet the claim limitations. For at least this reason, a prima facie case of obviousness has not been established. Other than a very general and conclusory statement in the Office Action, there is nothing in the two references that reasonably suggests why one would actually combine the teachings of these two references.

The Federal Circuit has stated that when patentability turns on the question of obviousness, the obviousness determination “must be based on objective evidence of record” and that “this precedent has been reinforced in myriad decisions, and cannot be dispensed with.” In re Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Moreover, the Federal Circuit has stated that “conclusory statements” by an examiner fail to adequately address the factual question of motivation, which is material to patentability and cannot be resolved “on subjective belief and unknown authority.” Id. at 1343-1344.

In the Office Action at page 8, the Examiner provides the following statements to prove motivation to combine Huang and Forslow, with emphasis supplied:

The motivation for providing the address of the network node with the application flow identifier as taught by Forslow . . . being that it provides the added feature of being able to specify and provide a certain particular communications service with a requested quality using the application flow identifier in the packet-based multi-access communications system of Huang et al.

Appellants submit that this statement is based on the type of “subjective belief and unknown authority” that the Federal Circuit has indicated provides insufficient support for an obviousness rejection. More specifically, the Examiner fails to identify any objective evidence of record which supports the proposed combination.

Second, Appellants assert that there is no reasonable expectation of success in achieving the present invention through a combination of Huang and Forslow. For at least this reason, a prima facie case of obviousness has not been established. The Office Action contends that the application flow identifier can be implemented by providing it in the address of the base station of Huang. Despite the assertion in the Office Action, Appellants do not believe that Huang and Forslow are combinable.

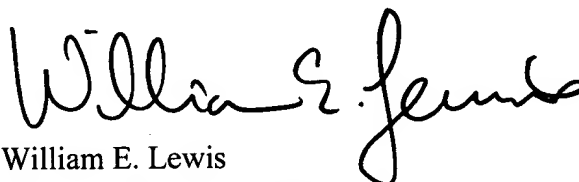
It is not clear how one would combine these references since there is no description in Huang of an assignment of a base station address. Further, there is no description in Forslow that the application flow identifier described in column 12, lines 35-55, may be included in a base station address. More specifically, Forslow only discloses the detection of an application flow along with an application flow identifier in the mapping of quality of service parameters. There is no further guidance provided in the Office Action.

Third, Appellants assert that even if combined, the Huang/Forslow combination fails to teach or suggest all of the limitations of claims 14 and 18. For at least this reason, a prima facie case of obviousness has not been established.

Appellants assert that claims 14 and 18 are patentable for at least the reasons that independent claims 12 and 16 are patentable, as discussed above. Claims 14 and 18 also recite patentable subject matter in their own right. For example, the combination of Huang and Forslow fails to disclose an address that is assigned to a network node that is a combination of a network node identifier, an interface identifier, and an application flow identifier. Accordingly, withdrawal of the rejection to claims 14 and 18 under 35 U.S.C. §103(a) is therefore respectfully requested.

For at least the reasons given above, Appellants respectfully request withdrawal of the §102(e) and §103(a) rejections of claims 12-14 and 16-18. As such, the application is asserted to be in condition for allowance, and favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "William E. Lewis". The signature is fluid and cursive, with the first name "William" being the most prominent part.

Date: September 20, 2004

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APPENDIX

12. A method for use in a network node of a packet-based multiaccess communications system, the communications system including a plurality of mobile user stations, comprising the steps of:

assigning an address to the network node, the address being a combination of an identifier of the network node and an identifier of an interface associated with the network node; and

transferring packets to and from the network node in accordance with the address, such that the network node is able to move within the communications system in addition to the plurality of mobile user stations.

13. The method of Claim 12, wherein the interface identifier is a data link address.

14. The method of Claim 12, wherein the address of the network node further includes an application flow identifier.

16. Apparatus in a packet-based multiaccess communications system, the communications system including a plurality of mobile user stations, comprising:

a network node configured to respond to an address assigned to the network node, the address being a combination of an identifier of the network node and an identifier of an interface associated with the network node such that packets are transferred to and from the network node in accordance with the address, and the network node is able to move within the communications system in addition to the plurality of mobile user stations.

17. The apparatus of Claim 16, wherein the interface identifier is a data link address.

18. The apparatus of Claim 16, wherein the address of the network node further includes an application flow identifier.